CLEAN COPY OF THE CLAIMS AS AMENDED
(Provided for the Examiner's convenience only)

1 – 70. (Canceled)

71. (Currently Amended) A method comprising

assessing the degree to which a human is susceptible to an undesirable bone density condition by identifying occurrence in a human's genome of a quantity of polymorphisms in each of two genes, the genes consisting of

a gene encoding a vitamin D receptor (VDR) present in the human's genome, and

a gene encoding interleukin-6 (IL-6) present in the human's genome

wherein the polymorphism in the VDR gene is a polymorphism manifested as change from a cytosine residue to a thymine residue 8 residues upstream of the normal start codon of the gene encoding vitamin D receptor, whereby the residue is part of an initiation codon and the gene encodes a variant vitamin D receptor comprising three additional amino acids at its amino terminus, and the polymorphism in the IL-6 gene is manifested as a change from a guanine residue to a cytosine residue at position -174 of the interleukin gene 6 promoter

thereafter calculating a susceptibility value for the condition by

summing the quantity of identified polymorphisms to yield a value for the human

wherein a value for the human greater than zero indicates a greater susceptibility to an undesirable bone density condition for the human.

72. (Currently Amended) The method of claim 71 wherein the susceptibility value of zero represents an absence of a polymorphic form identified as associated with a bone density pathology in each of a gene encoding a vitamin D receptor present in the human's genome and a gene encoding interleukin-6 present in the human's genome.

73. (Currently Amended) The method of claim 71 wherein the polymorphism is a single nucleotide polymorphism (SNP).

74. (New) A method comprising assessing occurrence in a human's genome of polymorphisms in each of two genes, the genes consisting of a gene encoding a vitamin D receptor (VDR) and a gene encoding interleukin-6 (IL-6),

wherein the polymorphism in the VDR gene is a polymorphism manifested as change from a cytosine residue to a thymine residue 8 residues upstream of the normal start codon of the gene encoding vitamin D receptor, whereby the residue is part of an initiation codon and the gene encodes a variant vitamin D receptor comprising three additional amino acids at its amino terminus, and the polymorphism in the IL-6 gene is manifested as a change from a guanine residue to a cytosine residue at position -174 of the interleukin gene 6 promoter;

whereby occurrence of the polymorphic form in each gene indicates an increased susceptibility of the human to an undesirable bone density condition relative to a human with fewer or no occurrences of the polymorphic form.

75. (New) A method comprising assessing occurrence in a human's genome of polymorphisms in each of two genes, the genes consisting of a gene encoding interleukin-6 (IL-6) and a gene encoding a vitamin D receptor (VDR),

wherein the polymorphism in the IL-6 gene is manifested as a change from a guanine residue to a cytosine residue at position -174 of the IL-6 promoter and the polymorphism in the VDR gene is selected from the group consisting of:

c) a polymorphism manifested as change from a cytosine residue to a thymine residue 8 residues upstream of the normal start codon of the gene encoding vitamin D receptor,

whereby the residue is part of an initiation codon and the gene encodes a variant vitamin D receptor comprising three additional amino acids at its amino terminus; and

d) a *FokI* polymorphism defined by a C/T nucleotide in exon 2, at the first of two potential translation sites, whereby the residue is part of an initiation codon and the gene encodes a variant vitamin D receptor comprising three additional amino acids at its amino terminus;

whereby occurrence of the polymorphic form in each gene indicates an increased susceptibility of the human to an undesirable bone density condition relative to a human with fewer or no occurrences of the polymorphic form.